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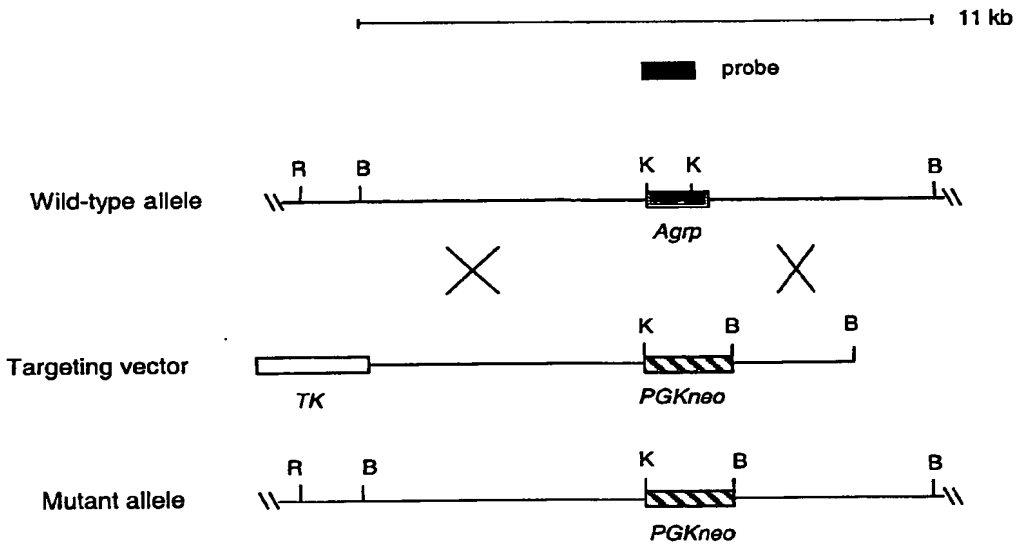
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AGOUTI-RELATED PROTEIN DEFICIENT CELLS, NON-HUMAN TRANSGENIC ANIMALS AND METHODS OF SELECTING COMPOUNDS WHICH REGULATE ENERGY METABOLISM



(57) Abstract: Cells and non-human transgenic animals have been engineered to be deficient in the gene encoding agouti-related protein (AgRP). AgRP deficient transgenic animals have a reduced day time respiratory quotient (RQ), indicating that AgRP is involved in the regulation of energy metabolism, resulting in the reduced usage of fat as an energy source. These AgRP deficient transgenic animals can be used to select for and test potential modulators of AgRP. This data allows for methods of screening for AgRP modulators which regulate energy metabolism and caloric utilization. The disclosure also relates to a NPY/AgRP double knockout mouse which can be used to select for and test potential modulators (e.g., agonists or antagonists) of AgRP and/or NPY.

WO 2004/004447 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US03/20245

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : A01K 67/00
US CL : 800/8
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 800/8

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KAELIN et al. Identification of a regulatory region controlling the spatial expression oand fasting response of agouti related protein in the mouse. Soc. Neurosci. Abstracts. 2000. Vol. 26. No. 1-2. Abstract #149.	1-20
X	WEINGARTH et al. Neither AGRP nor NPY are critically required for the regulation of energy homeostasis in mice. Soc. Neurosci. Abstract. 2002. Vol. 2002. Abstract # 134. See entire abstract.	1-20
X	QIAN et al. Neither agouti-related protein nor neuropeptide Y is critically required for the regulation of energy homeostasis in mice. Mol. Cell. Biol. July 2002, Vol. 22. No. 14. Pg 5027-5035. See entire article.	1-20
X	WILSON et al. The role of agouti-related protein in regulating body weight. Mol. Med. Today. June 1999. Vol. 5. No. 6. pg 250-256. See entire article.	1-20
X	BARSH et al. Molecular pharmacology of Agouti protein in vitro and in vivo. Annals NY Acad. Sci., 20 October 1999. Vol. 885. pg 143-152. See entire article.	1-20

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MILLHAUSER et al. Loops and links: structueal insights into the remarkable function of the agouti-related protein. Ann. NY Acad. Sci. June 2003. Vol. 994. pg 27-35. See entire article.	1-20
A	DINULESCU et al. Agouti and agouti-related protein: analogies and contrasts. J. Biol. Chem., 10 March 2000. Vol. 275. No. 10. pg 6695-6698. See entire article.	1-20

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Continuation of B. FIELDS SEARCHED Item 3:
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